

## REMARKS

### Amendments to the Specification

Applicants have amended the specification to remove the reference to the GB application in line two, which was somehow added in error between the time of the original filing and the Petition to Make Special. Applicants submit that no new matter is added with this correction.

Applicants have also left a message with the Examiner regarding the objection to the specification with respect to support for claims 3, 6, and 10. Applicants are confused by the objection so have not amended the specification at this time, but would like to state that there is adequate support for the cited claim limitations (“not more than 10” in claim 3; “alkyne, hydrocarbon and nitrogen” fluids in claim 6; and “wherein the catalyst includes a promoter” in claim 10) in the specification in the examples and detailed description. Moreover, all of these limitations are present in the original claims, as filed (see original claims 2, 5, and 9).

### Claim Rejections Under 35 USC § 112, first para

Applicants would first like to thank the Examiner for allowing claims 1-17, 19, 20, 22 and 23.

With respect to the remaining claims 18, 21, and 24-30, the Office Action states on p. 3 that there is no support in the application for the limitation “di-ether” as claimed in claims 18, 21, 24, 27 and 30, and there is no support for the limitation “non-gem diol” in claim 25. Applicants respectfully disagree. On p. 5 lines 26-32 (published PCT application p. 6, lines 3-7) it states that the “present invention is applicable to diols, triols and higher alcohols as well as alcohols” and that “it is particularly preferred that the optional substituent, when present, on one of the groups  $R^1$  to  $R^{11}$  is hydroxyl.” Reaction of a diol will necessarily produce a di-ether (see examples 6 and 7) and this would be readily apparent to the person skilled in the art.

Moreover, as pointed out in the Preliminary Amendment of March 27, 2003, submitted with the Application and a Petition to Make Special, support for claims 18, 21, 24, 27, and 30 is found in the results in Example 6 on p. 13, lines 30-34 in the right-most section of the reaction scheme, where 1,2-ethanediol and benzaldehyde are reacted to form the cyclic acetal shown. As those skilled in the art understand, an acetal is a particular example of a di-ether. Similarly, on p.

14, Example 7, lines 1-13, the reaction of 1,2, ethanediol with acetone yields the cyclic ketal shown on the right of the reaction scheme. Again, a ketal is merely a particular example of a di-ether. Thus, it is evident from the specification in numerous places, as well as in the examples, that the formation of di-ethers is contemplated and hence claims 18, 21, 24, 27 and 30 have support in the specification and so meet the written description requirement of 35 USC § 112, first para.

Similarly, claim 25 (and dependent claims 26-30) are directed to process wherein the first hydroxyl-substituted organic compound is non-gem diol. A non-gem diol is a diol in which the two hydroxyl groups are on difference carbons. A gem diol is a diol in which the two hydroxyl groups are on the same carbon. As disclosed in the specification on p. 5, lines 6-35 (published PCT application on pp 5, lines 15-30 and p. 6, first para.) that hydroxyl is one of the preferred substituent possibilities for the groups  $R^1$  to  $R^{11}$ . Thus, in either the primary, secondary or tertiary alcohols represented by the formulae  $R^1CH_2OH$ ,  $R^1R^2CHOH$ , or  $R^1R^2R^3COH$ , respectively, the possibility of a further hydroxyl group is disclosed. In the case of  $R^1CH_2OH$ , the two alcohol groups, when present, will be on the same carbon. This is the definition, as explained above, of a gem diol. But as disclosed in the specification on p. 5, lines 26-32, the groups  $R^1$  to  $R^{11}$  may be an alkyl group that is optionally substituted, preferably with a hydroxyl group. Thus, it is envisioned that any of the primary, secondary or tertiary alcohols (whose formulae are represented above and in the application) may have an alkyl substituent which is further optionally substituted by a hydroxyl group. In such a case, the compound would be a non-gem diol. In fact, Example 4 (p. 12), Examples 5 and 6 (p. 13), and Example 7 (p. 14) all provide reaction schemes wherein the “first hydroxyl-substituted organic compound” is non-gem diol. In Example 4 the first (and only) hydroxyl-substituted organic compound is 1,4-butanediol. In Example 5 the first hydroxyl-substituted organic compound is 1,6-hexane diol. In Example 6 the first hydroxyl-substituted organic compound is 1,2-ethanediol. And in Example 7 the first hydroxyl-substituted organic compound is 1,2, ethanediol. All of these compounds are non-gem diols.

For at least these reasons, Applicants believe that claims 18, 21, and 24-30 meet the written description requirement of 35 USC § 112, first para. Withdrawal of the written

description rejections and a notice of allowance for all pending claims is therefore respectfully requested.

Applicants do not believe that any fees are due for the submission of this response or timely consideration of this application. However, in the event that fees are due for the timely consideration of this application, Applicants request that any necessary fees be charged to Deposit Account No. 19-4972.



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